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Citizens' Bulletin

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The Connecticut Department of Environmental Protection

Woodpeckers ... avian version of the drum corps

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January 1983
Volume 10 Number 5
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Cover Photo: Male downy woodpecker; Irene Vandermolen

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New publications

DEP's Natural Resources Center announces the availability of several new publications. They are:

* "Water Resources Inventory of Connecticut, Part 10, Lower Connecticut River Basin," Water Resources Bulletin No. 31. Prepared by the U.S. Geological Survey in cooperation with the Connecticut Department of Environmental Protection under a program to determine the quantity and quality of water available in the State.

The report is designed to be useful to planners, public officials, consultants, and others concerned with the development, management, use, conservation, and protection of water resources within the Lower Connecticut River Basin. Price: $10.00.

* "An Atlas of Public Water Supply Sources and Drainage Basins in Connecticut," D.E.P. Bulletin No. 4. Prepared by the D.E.P. Natural Resources Center.

The Atlas contains all Connecticut topographic quadrangles at a scale of 1:50,000. Each map displays the land topography, the location of public water sources, and the boundaries of all drainage basins to the subregional level. Price: $10.00.

* Guidebook for Field Trips in Connecticut and South Central Massachusetts, New England Intercollegiate Geological Conference," Guidebook No. 5. Prepared for the 74th N.E.I.G.C. Annual Meeting by the Department of Geology and Geophysics, University of Connecticut, and the Geological and Natural History Survey, Connecticut DEP.

The Guidebook contains directions and descriptions for 17 Quaternary, Mesozoic, Paleozoic, and Precambrian geological field trips and a copy of the 1982 Preliminary Bedrock Geological Map [illegible] Connecticut. Price: $10.00.

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For ordering information, please write to the Department of Environmental Protection, Natural Resources Center, Publication Sales, 165 Capitol Avenue, Room 555, Hartford, CT 06106.

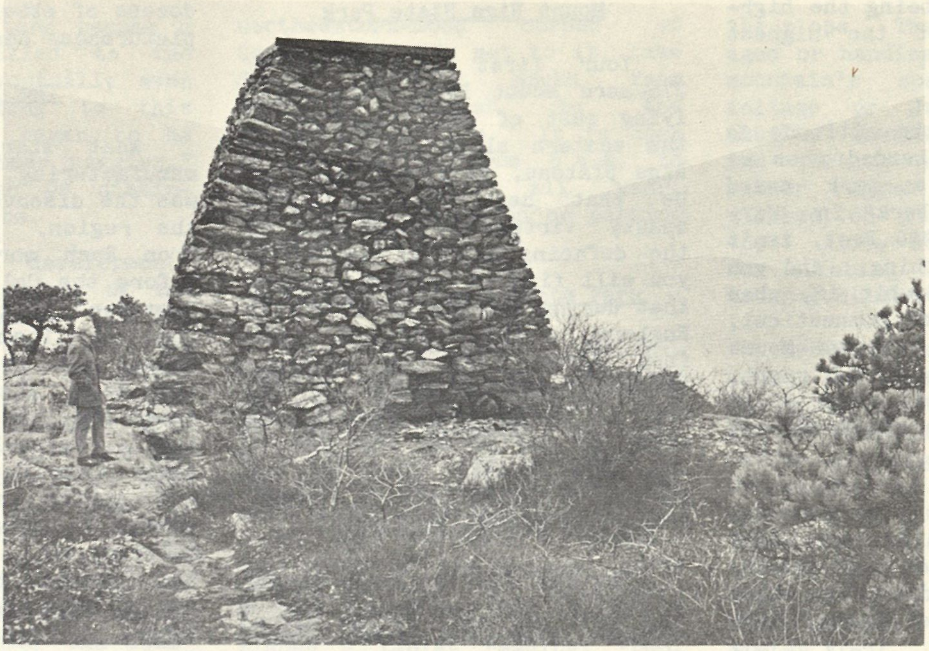
All orders must include 7.5 percent State tax and a $1.00 handling charge per order. ■

Conservancy guidebook

A new guidebook entitled "Country Walks in Connecticut: A Guide to the Nature Conservancy Preserves" has been published by the Appalachian Mountain Club and the Nature Conservancy Connecticut Chapter. The book, written by Susan Cooley, Associate Director and Land Steward for the Nature Conservancy, will be available in books stores, from the AMC, and from Nature Conservancy Chapter headquarters.

The first section of "Country Walks in Connecticut" covers some larger Nature Conservancy preserves with established trails. The second discusses other sanctuaries, many of them without trails or otherwise difficult of access.

The 200-page softbound guidebook is $6.95 ($5.95 for Nature Conservancy members) plus $1 postage and handling. Order it from: The Nature Conservancy, Connecticut Chapter, Science Tower, PO Box MMM, Wesleyan Station, Middletown, CT 06457; phone 344-0716. ■



Mary Lou Estabrook, The Lakeville Journal

This 1975 photo shows the tower on Bear Mountain still standing.

Go tell it on the mountains . . .

Robbins Battell ‘collected’ the tops; two are State parks

By John Waters

In Anthony Newley's offbeat musical "Stop the World, I Want to Get Off," the sleazy non-hero sings "Gonna Build a Mountain, Gonna Build It High," a spoof on "inspirational" pop songs.

Almost certainly the song's English composer never heard of Robbins Battell, whose mind also ran to mountains, but who was too sensible a Connecticut Yankee to try to build them. He bought them instead -or at least the tops of them. Since there is no telling how far a collector will ride his hobby, he is reported to have "acquired high places all over New England," including Bear Mountain, Haystack Mountain, Ivy Mountain, Canaan Mountain, Mount Bradsford, and Ball or Bold Mountain.

As a result of Battell's passion for peaks, Connecticut received two of its smallest parcels of parkland, parcels of five acres and one acre respectively. One, in Salisbury, was the top of Bear Mountain, now part of Mount Riga State Park. The other, in Norfolk, was the top of Haystack Mountain, now part of Haystack Mountain State Park.

Bear Mountain

Stung by "Encyclopedia Britannica's" assertion that no Connecticut mountain was as high as 1,000 feet, Battell hired a surveyor to measure the mountains in Litchfield County. The surveyor reported that Bear Mountain was 2,345 feet, the highest point in the State.

Delighted by his victory over the Britannica, Battell acquired the peak with a 999-year lease in 1885. He built a stone cairn on it, with a tablet stating that it was the highest point in Connecticut. He did not live to discover that he was wrong. A fairly recent survey says it is only 2,316 feet, which is 64 feet lower than a point in the Connecticut side of Mt. Frissell, whose peak is in Massachusetts. So, Bear

Mountain ends up being the highest peak but not the highest point in the State.

(Don't think the altitude is making you light-headed when we tell you that a park named "Above All State Park" in Warren, at a mere 1,440 feet, isn't above much of anything. And you won't be seeing double if, when looking at a map of Connecticut, you see not one but two Mount Toms. They're there all right: one near Litchfield, the other near Moodus. Only the former is a State park.)

The cairn that Battell built at Bear Mountain's peak was in the form of a dry-wall stone tower about 23 feet high, which the Appalachian Trail now passes. It took Owen Travis, a noted local stone mason, three years to build it, the stones being hauled to the site by ox teams. Since the stones were not cemented, the tower was slightly pyramidal. A lightning rod with a metal ball protruded from it. For many years the tower was the goal of hikers making the steep climb. In 1972, when it needed repairs, a helicopter carried materials up to the workmen, who placed a concrete cap on the stones.

Within a few years, vandalism and weather caused damage to the east face of the tower and eventually, despite repairs by Explorer Scouts from New Canaan, the entire east side caved in, dumping the heavy cap onto the rubble. The ball on the lightning rod, peppered with bullets, became the home of hostile hornets.

Late in May 1982, Commissioner Stanley J. Pac of the Department of Environmental Protection climbed to the top of Bear Mountain to inspect the damage and determine whether the cost of a complete rebuilding would be justified. Considering the repeated vandalism and the impossibility of adequately policing the site, he has decided to spend only enough to stabilize what is left of the tower rather than rebuild.

Mount Riga State Park

Your first impression of 276-acre Mount Riga State Park, lying east of Bear Mountain on the eastern slope of the Mount Riga plateau, is almost bound to be that here is wilderness beauty virtually untouched by the defacing hand of man. So you will find it hard to believe that during the War of 1812 with England, a blast furnace 1,000 feet further up the mountain belched fire and smoke all day and all night to produce pig iron for the forges and factories that dotted what is now bucolic Litchfield County, especially around Salisbury.

You may find it even harder to believe that there was then a wartime boom-town named Mount Riga on the side of the mountain, with a four-clerk department store that sold expensive silk dress materials and other luxuries to the well-to-do valley women. The fathers, husbands, or brothers of these women were the Litchfield ironmasters who had become rich, during the Revolutionary War, selling George Washington's army and navy thousands of cast iron cannonballs, cannons, grapeshot, anchors, and chains. For example, from this region came the giant chain that the Yankees strung across the Hudson at Anthony's Nose, near West Point, to keep the English fleet from penetrating the northern reaches of the river.

In the eyes of the Colonial governor, these ironmasters were treasonous outlaws because England had declared it illegal to make or sell American iron. If you wanted iron, you were supposed to buy the made-in-England product at much higher prices. Connecticut-born Ethan Allen, after working as a bookkeeper for one of the Salisbury ironmasters, gave an early demonstration of his rebelliousness by becoming co-owner of the first blast furnace in Furnace Village (now Lakeville). Today, near Mount Riga State Park, at Forge Pond on the Mount Washington Road, you can see a restored iron forge that goes back to Revolutionary War times. There were dozens of others like it in this picturesque corner of the State.

The Iron Rush

What started the county's manufacturing boom in the 1730s was the discovery of iron ore in the region. This produced an Iron Rush more than 100 years before the California Gold Rush. Promoters bought up land to get the ore; then they built furnaces and forges. Seemingly limitless stands of chestnut trees provided the best wood for making charcoal. Abundant water power from Wachocastinook Creek and other streams furnished energy to operate huge leather bellows that blasted air into the furnaces to burn impurities out of iron ore mixed with limestone. Fumes were dispersed from a tall pipe; and the molten iron was poured into sand molds called "pigs." Fuel had to be hauled to the furnaces by oxen.

The Mount Riga iron operation did not get under way until after the Revolutionary War. A forge was operating there by 1781; and in 1810, a blast furnace was completed just in time to scoop up profits from the War of 1812. In fact, the anchor of the U.S.S. Constitution ("Old Ironsides") was forged on Mount Riga.

How the mountain, the town, and the park acquired such an un-Yankee name is not clear. Some say that Yankee workmen were too independent to accept hot, dirty jobs in the foundries and furnaces, so the ironmasters imported willing workers from Riga in Lithuania. Others claim the name is derived from a Swiss word "Rhigi," which is a possibility because Swiss workers also were imported.

Riga Raggies

There is also difference of opinion on the pronunciation of Riga, some calling it Reega, others Rye-ga, others Rigga, others Ragga, and others Raggy. "Raggies," its plural, is the local name for certain inbred descendants of laid-off ironworkers who took up existence on the mountain when the forges and furnaces shut down, one by one, about 1847. The term became a regional term applied to the rural poor, and eventually even summer people coming to this region every year began to be referred to as "summer raggies," no matter how rich or distinguished they might be.

Several developments accounted for the demise of the region's iron industry. One was the disappearance of chestnut trees for making charcoal because trees were cut down faster than they could grow back. Another was that the new railroads made obsolete pack horses and oxen and made it cheaper to transport ore to where the fuel was than to transport fuel to where the ore was. Thus ironworks that sprang up in Pittsburgh near the coalfields used ore brought by rail from Minnesota. The final blow was the new Bessemer process, which made it feasible to use ore of poorer quality.

Ghosts

Little by little, Mount Riga and the surrounding country reverted to its natural state, but small level areas scattered through the woods mark the sites of one-time charcoal-burning pits. Today, the park's chief attraction is the ghosts that inhabit it as well as the now peaceful villages around it: ghosts of Revolutionary officers visiting the furnaces and forges to order or inspect the war materials that drove the Redcoats out -ghosts of tough, ambitious immigrant ironworkers whose introduction to the American Dream was 12-hour days of back-breaking toil at the white-hot furnaces -ghosts of valley ironmasters building the magnificent Litchfield County homes.

The park today is pretty much a nature preserve, with no special conveniences or popular attractions. Its main appeal is to hikers, birders, students of nature, and admirers of autumn foliage. From the top of Bear Mountain there are breath-taking views of the Berkshires and the Twin Lakes.

On the State Tourist Map, Mount Riga State Park is in Block C-1 at the northwestern-most corner of Connecticut. To get to it, take State Route 41 north from Salisbury almost to the Massachusetts line. It is open to the public from 8 a.m. to 8:30 p.m. daily, all year. There is no admission or parking charge.

Haystack Mountain State Park

As mentioned earlier, Robbins Battell also acquired one acre at the 1,680-foot peak of Haystack Mountain in 1886. He built a carriage road most of the way up to it and capped the peak with a wooden observation tower that provided a spectacular view of the Taconic range of hills and of Blackberry Valley below. In the tower he placed a tablet reading: "Deo, patriae, familia, municipio, semper esto fidelis." This translates as "To thy God, to thy country, to thy family, to thy town, be thou ever faithful."

In 1917, for one dollar, his daughter Ellen (Mrs. Carl Stoeckel) deeded the one acre summit to the State to insure its preservation as a memorial to her father, who had died in 1895. Then in 1929, she gave the State $50,000 to acquire more land on the mountain and to build a new stone tower and an automobile road up from North Street, Norfolk.

This tower, which is 24 feet in diameter, rises 34 feet above the highest point on the mountain and 1,716.43 feet above sea level. An "eternal" light at the top of it made it a landmark for miles around. The light was Mrs. Stoeckel's memorial to her husband, along with a tablet inscribed with his name and the words: "Requiem aeternum dona eis Domine et lux perpetua luceat eis" (Eternal rest give unto him, O Lord, and may perpetual light shine upon him). The tablet to Robbins Battell from the original tower was mounted in the new one.

The old carriage road remains as a footpath. The new road ascends the 500 feet from the highway at an easy grade for cars and terminates in a small parking lot on the south side of the slope. The road enables the aged or handicapped to enjoy the mountain's spectacle of fall foliage or June's outstanding show of mountain laurel. From the parking lot, there is a rather rugged half mile to be climbed on foot to reach the top. Allow about half an hour for climbing if you are not a trained climber.

From the summit, Long Island Sound, the Berkshires, and peaks in Massachussetts and New York may be seen on a clear day. A native of Oregon wrote: "I was overwhelmed by the beauty of the surrounding country viewed from the tower...I must say that the view I saw from Haystack Mountain was the best yet here in the Eastern part of United States."

Haystack Mountain State Park is open to the public daily from 8 a.m. to 8:30 p.m., except in March during the mud season. There is no admission or parking fee. To get to Haystack Mountain State Park, take U.S. 44 west from Norfolk and turn onto State 272 north for about a mile to the entrance. On the State Tourist map, the park appears in Block D-1.

Music for His Mountains

In the summer when you are this close to Norfolk, you may want to enjoy another of Robbins Battell's philanthropies: the Yale-at-Norfolk Music Center's open air concerts. Battell, in addition to being a probate judge, a State assemblyman, a State senator, State comptroller,and president of the Connecticut Historical Society, was also an educator and a lover of classical music. He founded the Norfolk Music Shed on what is now known as the Battell-Stoeckel Estate in Norfolk. The shed and the estate were given to Yale University's Music Department. (Yale's first organist and vocal music instructor, in 1885, was Gustave J. Stoeckel, father of Battell's son-in-law, Carl Stoeckel.) Do not confuse Yale-at-Norfolk with nearby "Music Mountain" in Falls Village. Mountain and music fancier Robbins Battell had no connection with the latter. ■

By Kirsten Engel, Environmental Intern

Are pollutants making you sick?

DHS unit keeps eye on toxic hazards, human health

It's 1:30 on a Monday afternoon as Alan Siniscalchi, Acting Chief of the Toxic Hazards Section of the State Department of Health Services, and DHS Epidemiologist John Keys climb the carpeted steps of a downtown office building. The acrid odor that pervades the lobby seems to follow them as they make their way up toward a pair of third floor office suites.

Siniscalchi and Keys are responding to a call made a few days earlier by a woman working in the office. The woman herself had experienced dizziness and a headache and claimed that the other office workers were experiencing similar sensations. A male member of the staff developed chest pains and was admitted to a hospital emergency room. Other than fumes left over from a basement fire a week earlier, or fumes escaping from a silk screening room on the floor above, there seemed to be no explanation for the office epidemic.

The building manager, not at all pleased with the presence of health department officials, leads Siniscalchi and Keys to the air conditioner on the fourth floor. Siniscalchi takes the manager's persistent presence in stride, carefully explaining to him the air sampling procedure and only once commenting, when the manager is safely out of hearing, "He is why we often make unannounced visits."

A portable air pump makes the air sampling procedure relatively simple. Siniscalchi chooses two windowless offices in which to run tests. After checking to make sure the air conditioner is turned on, as it had been the day the workers had felt ill, Keys unloads the pump, inserts a carbon filter, and plugs it into a wall socket. As the machine whirrs, Keys measures the room temperature with a wet and dry bulb thermometer. The pump draws air through a charcoal filter which absorbs organic solvents. "It takes at least 40 minutes to take a good sample, and then we have to wait a week while the lab checks for the presence of toxics," says Keys.

While waiting for the air sample, Siniscalchi and Keys talk to workers in the basement. "Unless someone opens a window, the fumes in the building just circulate through the air conditioner," a supervisor tells them.

As it turns out, the silk screening room was the source of the fumes. The air sample showed high levels of a toxic substance used in the silk screening process, methyl ethyl ketone (MEK). Among its other acute health effects, MEK disrupts the central nervous system. An especially alarming study conducted only recently on rats found MEK caused birth defects in rat offspring. Siniscalchi figures that a variety of factors, such as the air currents and the amount of silk screening done, were at work to create unusually high levels of fumes on the day in question.

We live in an age when we often wonder what doesn't harm our health. Every day you seem to hear of yet another chemical that has been banned for its toxic effects. "Widely used as a household and industrial (fill-in-the-purpose), Chemical X has been determined to cause...," the reports read. Though we may not enjoy hearing the bad news, we should know what these toxic substances are and how they can harm us. But who traces the health threat to Chemical X? Who assesses the degree of risk? Who alerts the public? And who is capable of telling us how to avoid a health risk?

In Connecticut, these are the responsibilities of the Toxic Hazards Section, a division of the Department of Health Services. Its four member staff studies indiviidual cases of contamination to understand general health risks. The unit's concerns extend beyond variants of chemical X to include health risks posed by radiation, landfills, and industrial accidents.

The Toxic Hazards Unit was created four years ago as a watchdog for the public health, addressing effects of exposure to chemicals and radiation upon the human body. It intervenes when the general health of the public is endangered, in contrast to the federal Occupational Safety and Health Administration (OSHA) which intervenes when workers are exposed to toxic chemicals and radiation in the workplace. The DHS unit may become involved with industries, however, if a hazard threatens the health of the general public.

Most people live unaware of the prominent role played by chemicals in their daily lives. Chemicals are present in the food we eat, the water we drink, the insulation we install in our homes--the list goes on and on. Radiation, and the possibiliity of a nuclear accident, has also become a part of everyday life. Most restaurants and many homes use microwave ovens, and every Connecticut citizen lives less than 60 miles from some kind of nuclear reactor. It is up to the Toxic Hazards Section to spread the word about dangers and suggest ways in which people can prevent, avoid, or corrrect toxic contamination.

Prior to 1978 toxic substances problems were referred to municipalities or to the DEP. But, according to Siniscalchi, no department at either the State or the municipal level focused on protecting the health of the general population. "Local health departments don't have the experts or the staff to investigate some of the larger problems, such as PCB contamination, and people at DEP have mostly engineering or environmental backgrounds." Each member of the toxic hazards staff has a biomedical science or public health degree, and one staff member, epidemiology consultant Matt Lopes, has had three years of medical school training.

The Section has three basic functions. The first is running a "toxic hazards hotline" and responding to the dozens of calls they receive each day concerning the safety of commercial products used in the home or workplace. Inquiries range from property owners concerned over toxic effects of the pesticides they're using on the gypsy moths in their back yards to an entire community complaining of nauseating fumes pouring out of a nearby smokestack. More often than not, a call prompts toxic hazards staff to make an on-site investigation and a laboratory analysis.

The second function requires a great deal of investigation. The section is responsible for tracing disease outbreaks to specific sources, be they chemicals or industrial processes. Sometimes the section will be notified of an outbreak by those suffering the ill effects; otherwise cases are routed to the Toxic Hazards Section by the staff in the Environmental Health Services Section of Health Services. One current project being researched involves a thyroid cancer cluster. The staff is trying to find the common aspect of the victims' lifestyles which may have caused the disease.

Finally, once the culprit substance has been found, the unit's function is to determine the general health effects and issue recommendations for corrective or preventive action. The rest is up to local health departments and the individuals involved. "Unlike DEP units," said Siniscalchi, "which work under specific statutes, we have only two sources of authority and no way to enforce our recommendations."

The two sources are the State's x-ray regulations and the federal Carcinogenic Substances Act passed in 1977. Recently proposed, diagnostic x-ray regulations are now under review by the Legislature. The new regulations cover all diagnostic purposes of x-rays and recommend that they not be routinely administered by hospitals and physicians, that patients be notified of the potential risks of x-rays to a fetus, for example, and that personnel working with x-rays use protective shields. The Carcinogenic Substances Act allows the Unit to ask industries if they are making or processing any of the 20 carcinogenic substances recognized by the State of

Connecticut. But the ability to request a list does not give the unit the authority to stop a plant from manufacturing a chemical. And besides, said Siniscalchi, "Companies report to us what they're using, but there's no way to check the accuracy of their reports."

If the responsible party refuses to comply with control or preventive measures, the section is able to turn to the Attorney General for help. In cases where the party objects to an investigation, "the Health Services Commissioner will grant us the authority to examine the situation if we decide that the health risk is great enough," said Siniscalchi. Although there have been few cases when they have actually needed one, the section may secure a search warrant before investigating a private industry.

Because so much of the actual enforcement is left to municipalities, the section offers bi-weekly training sessions for health officials to share up-to-date information on toxic hazards.

Some sample topics of these seminars include: "What Fraction of Cancer is Due to Environmental Chemical Contamination? The Contribution of Water, Food, Air Pollution, and Occupation"; "Indoor Air Pollution; The Tight Building Syndrome and Assessment of Indoor Formaldehyde Exposures"; "Toxic Chemical Dumps; Assessment of Their Health Hazards"; and "Nuclear Power Industry and the Health Effects of Low Level Ionizing Radiation."

"We had to prove we drove 750 miles a month to get our own car from the State," says Siniscalchi on the way to a small town in southwestern Connecticut. "We easily drive that -- one month we traveled twice that distance. Frequently we go out when there's a suspicion of a toxic hazard only to find out it's something else."

Two days after the office building investigation, the day begins with one of those cases. Siniscalchi and Keys, this time accompanied by Matt Lopes and intern Carolyn Jean Dupuy, visit an emphysema victim and hs wife who are complaining of a powdery white dust covering their house. The couple insist that their landlord has been negligent in the care of their heating and ventilation system. "Normally this would be the business of the local health department," says Keys, "but this man isn't satisfied with the way they've handled his case. That's where we come in."

Kirsten Engel photos

DHS Epidemiologist Matt Lopes sets up air sampling equipment.

The landlord has indeed been at fault, as it turns out, and the furnace badly needs repairs. No toxic substances are found in the dust, however, so Siniscalchi decides to refer the case to the health department's housing authority which can force the landlord to make repairs. Though the expertise of the toxic hazards section was not needed in this instance, their concern and willingness to investigate the situation in person certainly was.

Next the team visits two public schools in Clinton with asbestos insulation. On the way over Siniscalchi explains that asbestos insulation was common in homes and schools built during the baby boom of the 1950s and 60s. Asbestos is actually a family of minerals found in many rock formations, which, when separated from other minerals, becomes a fluffy fibrous material. Mixed with adhesives, asbestos is an ideal insulation, fireproof and easily sprayed or applied to ceilings and pipes. Unfortunately, asbestos fibers, which begin to peel off as the ceiling deteriorates, are carcinogenic.

Mesothelioma, a disease which is rare except in people exposed to asbestos, is a cancer of the chest and abdominal lining and is almost always fatal within one year of the first symptoms. "This disease," said Siniscalchi, "is becoming increasingly linked to asbestos exposure. Workers who handled asbestos when there weren't any regulations on its use are now showing up with the disease."

Asbestosis, a disease in which the lungs are irritated by inhaled asbestos dust, may appear 10 to 20 years after exposure. Asbestos fibers have also been traced to cases of respiratory cancer where the frequency of the disease is eight times as great among asbestos workers as among the general public.

Although these diseases have been found in workers handling asbestos products, even a low level exposure to asbestos is thought to be a health hazard. Epidemiologists are especially worried about the fiber's effect upon children. In 1977 the Environmental Protection Agency demanded that all schools be surveyed for the presence of asbestos insulation and proper measures to taken to mitigate possible exposure. During 1979-80 almost all the schools in Connecticut requiring either asbestos removal or encapsulation were taken care of, though a few of the schools, such as the one being investigated by the Toxic Hazards team, escaped detection.

There are three methods of dealing with asbestos: encapsulation, enclosure, or removal. Encapsulation is a temporary measure -the asbestos is simply covered with a coating of latex paint. Beneath the paint the asbestos will continue to deteriorate and will eventually peel off. Enclosure is a somewhat better solution, though it is also unable to completely eliminate the danger. It involves constructing a wooden frame around asbestos pipes or a suspended ceiling below the asbestos insulation. Problems may arise, however, when the building needs repairs and the protective seal must be broken.

Though much more expensive, removal is the only permanent solution. School authorities often resent the costs involved, which may run from an average of $200,000 to two million dollars for an extensive removal job.

At the schools the team takes air and dust samples to determine the presence of asbestos fibers in the air. The greater the degree of deterioration, the greater the likelihood of asbestos fibers floating through the air and entering someone's lungs. Earlier the team had taken a "grab sample," a chunk of asbestos, from the ceiling to confirm the presence of asbestos. The unit is recommending that the entire ceiling be replaced because of its damaged condition.

The office investigation and the house and school visits illustrate only a few of the toxic health hazards with which the section gets involved. Currently the staff is working on several long-term projects as well as responding to a variety of shorter-term requests, either by phone or in person.

One continuing project involves a landfill in Southington, Connecticut. Because the landfill was started decades before the creation of either the EPA or the DEP, no regulations were followed as to the chemicals dumped or burned there. This landfill was sold some time ago to a developer who has since built commercial buildings and homes directly on top of the landfill site. Benzene, a volatile and toxic carcinogenic compound, and methane, a highly flammable gas, have been found inside the buildings.

Benzene was at one time freely dumped in the landfill. Methane is produced through the natural decomposition of other wastes. The unit is now running tests that will reveal the levels of gases circulating within the buildings. Depending upon the levels found, Siniscalchi may recommend anything from increased ventilation to immediate evacuation.

Often the nature of a toxic problem requires that the unit work cooperatively with other government departments, such as the DEP, For example, the contamination with PCBs of one of the finest fishing streams in Connecticut, the Housatonic River, is a threat to both human health and the quality of the environment.

PCBs are highly toxic chemicals closely related to DDT. The stability of the compound rendered them useful in industry but, at the same time, extremely persistent in the environment. "They're virtually impossible to break down," Siniscalchi commented, "except by incinerating them at around 1100 degrees."

PCBs are known to cause cancer in laboratory animals, and there is some evidence that workers exposed to the chemical have a higher than normal cancer risk as well. Exposure to extremely high concentrations of PCBs will cause permanent skin, nervous system, and lung disorders. This fact became known through a tragic incident in 1968 when a supply of cooking oil was accidentally contaminated with PCBs in Japan, causing severe health effects in those who ate the oil.

PCBs accumulate in the sediments at the bottoms of rivers and aggregate in the tissues of fish that eat the small microscopic organisms that live in the nutrient-rich sediments. The PCBs in the Housatonic are believed to have come from a plant in Pittsfield, Massachusetts, which had used the Housatonic as a dumping site until the late 1960s when the toxic effects of the chemical began to become known. The EPA has since outlawed the manufacture, processing, and distribution of PCBs.

Unfortunately, this relatively recent regulatory action won't help erradicate the PCBs already in the Housatonic. While the DEP and the Army Corps of Engineers are considering ways to rid the river of PCBs, the Toxic Hazards Section has been conducting a series of tests on the river's fish and fishermen. In the largest aquatic testing program ever conducted in the State, 400 to 500 fish samples were analyzed to see if any species were safe for consumption. PCBs were found in all species; in some they occured in levels higher than the upper limits set by the federal Food and Drug Administration.

These findings led the Toxic Hazards Section to issue a recommendation that none of the fish caught in the Housatonic River be eaten. In addition, the section conducted blood tests on 200 Housatonic fishermen who regularly eat the fish to assess the health effects of PCB consumption. No acute health effects were found, but the unit did find that the fishermen and their families had larger amounts of PCBs in their fatty tissues than normal.

Perhaps the issue most frequently referred to the Toxic Hazards Section concerns urea formaldehyde (UF) foam insulation, which was banned by the Consumer Product Safety Commission after research linked formaldehyde with cancer in animals and flu-like illnesses in humans. Ten thousand homes in Connecticut and 500,000 homes across the nation were insulated with UF foam prior to the ban in February of 1982. Laurie Ingels, epidemiologist with the Toxic Hazards Section, investigates hundreds of homes every year which have been insulated with UF foam.

Alan Siniscalchi, DHS Toxic Hazards Unit's acting chief, and intern Carolyn Jean Dupuy inspected a smoke-filtering device thought to be causing high ozone readings in an office.

UF foam had been a popular form of insulation because it was so easy to install. "It was thought to be the solution to every energy problem," said Matt Lopes. "The foam was just pumped into the walls; you didn't even need to take walls apart." Once the foam hardens it becomes a hard wall thermal insulation. Problems start to arise, however, directly after the installation when formaldehyde gas is released from the hardened foam. High temperatures and high humidity levels will speed up the gas-releasing process.

Persons exposed to formaldehyde may experience acute (short-term) health effects similar to the symptoms of hay fever. The homeowner may be unaware of the source of the irritation since formaldehyde can produce these effects in concentrations so small that its presence cannot be detected by smell. Siniscalchi is concerned about both the risk of cancer and the possibility that persons living in a treated house will develop a hypersensitivity to formaldehyde. "In extreme cases, one then has to become a recluse from society," he said, "because almost all products have some formaldehyde in them." A January update in Life & Health magazine reports the use of formaldehyde in such common household items as toothpaste, shampoo, mascara, deodorants, facial tissue, dyes, and air fresheners. "Once persons have been exposed to high levels of formaldehyde, from then on exposure to even low levels of formaldehyde will cause them upper respiratory problems."

For Connecticut residents who own homes with UF insulation there is neither a simple nor a cheap solution. "There's not much they can do except take down all the walls," said Siniscalchi. "Even then it may have soaked through into the interior woodwork. It may cost from $10,000 to $50,000 and may be cheaper in the long run to destroy the house and buy a new one." Five hundred Connecticut residents have already called the Toxic Hazards unit to receive this discouraging news. ■

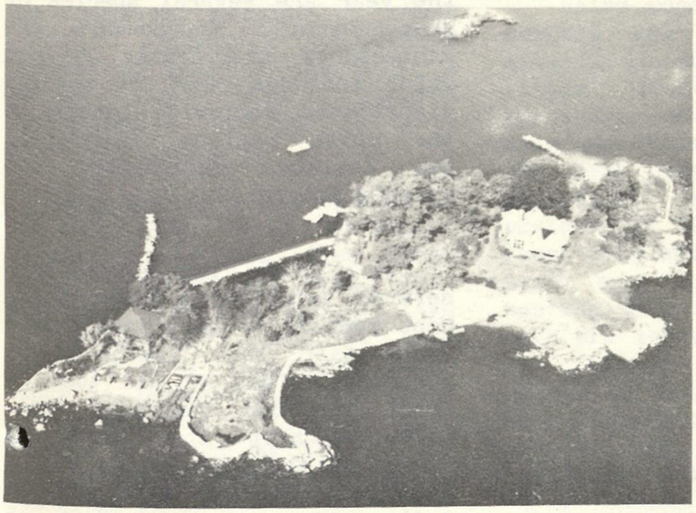
coastal
area
management
71 capitol avenue hartford conn. 06106

By Diane Giampa,
Public Participation Coordinator

CAM NEWS

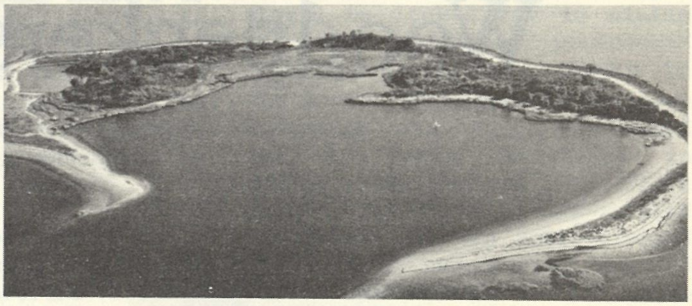
Connecticut's islands: unique and fragile

Islands have long been thought of as places of retreat, relaxation, solitude. The Connecticut coastline is dotted with roughly 143 nearshore islands that comprise about 90 miles of undeveloped shoreline. Many of these islands support flora and fauna that have all but disappeared from the mainland. Some of these bits of land have fascinating histories of pirate lore, while some have interesting present-day occupants: cartoonist Gary Trudeau owns a home on one of the Thimble Islands. The islands are largely uninhabited, however, because of difficulties getting to and from them. ■

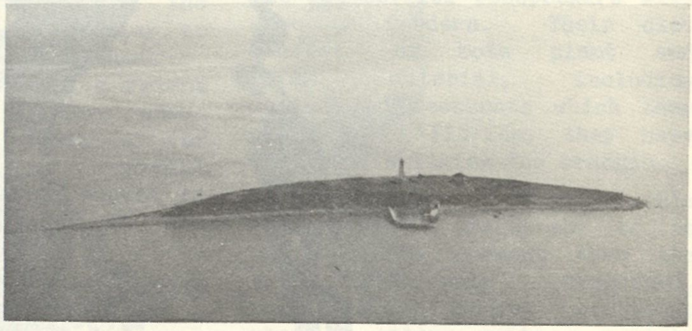


Dan Rothenberg photos

Tavern Island is one of the Norwalk Islands. Lillian Hellman wrote her hit play "The Little Foxes" here, and the late Billy Rose, Broadway producer, bought the land in 1958 and brought Grecian statues and exotic birds to decorate it.



Cockenoe Island, off the coast of Westport, was formed about 12,000 years ago by the glaciers. Characteristically, its shores are cobble or "shingle" beaches, made up of round stones worn smooth by the retreat of the ice masses.



Faulkner's Island's historical lighthouse shines its beacon toward the coasts of Madison and Guilford. The island is a critical breeding habitat for colonies of nesting seabirds such as common and roseate terns.

The Fish Islands may once have been a part of Darien's shoreline before the sea level rose. Connecticut is made of bedrock, and these islands are the tops of submerged bedrock hills with a thin soil covering that supports vegetation.

By Penni Sharp

Nature Notes: Woodpeckers

Irene Vandermolen photos: Male hairy woodpecker

Many of us derive pleasure from feeding and watching birds during winter. Safe in the comfort and warmth of our dwellings, we can gaze out our windows during swirling snowstorms and admire many of the feathered creatures which remain in the Northeast to endure the difficult conditions posed by unpredictable winter weather.

A large proportion of the bird species that breed in or migrate through Connecticut has long since departed for more hospitable realms. Birds that travel southward include those dependent upon flying insects and/or fleshy fruit for food. It is also believed that birds migrate in response to the stimulus of decreasing day lengths.

Those that remain must forage for hibernating insects, larvae, weed seeds, dried fruits, and the like. In addition, they have to contend with severe winter storms which not only bring extreme cold but can cause some food supplies to become inaccessible. One cannot help but have special admiration for the permanent avian residents of our woods and fields.

Among the birds noticed more in winter than at other times of the year are several species of woodpeckers. Woodpeckers are members of the family Picidae which includes over 200 species distributed worldwide except in the polar regions, Australia, New Zealand, Madagascar, and oceanic islands.

As a group, woodpeckers have several interesting adaptations. Most members of this family have extra-stiff tail feathers and zygodactyl feet -- two toes in front and two behind. These features help the birds in climbing, the toes giving them a good grip on tree bark and the tail acting as a support or brace. A woodpecker skull is heavier-boned than that of most birds. Anyone who has watched a woodpecker drum on the limb of a dead tree can appreciate the bird's need for a durable skull!

Perhaps the most unique adaptation is the woodpecker's tongue. The tongue is extra long and extensible and has a barbed or brushed tip. Once the woodpecker has excavated a cavity, with its remarkable tongue it is able to impale and withdraw the unsuspecting insect larvae within.

The downy woodpecker (Picoides pubescens) is the smallest Eastern woodpecker and the one most commonly seen. A sparrow-sized bird which frequents woodlots, yards, and parks, it has handsome black and white plumage. Males sport a small red patch on the back of the head. Downy woodpeckers can be quite tame and will readily come to feeders in winter. When not after seeds and suet, these birds work industriously in trees and shrubs hammering away in search of insect grubs. Approximately three-fourths of the downy's diet consists of animal matter, most of which is insect larvae. Many of the larvae are harmful species such as the pine weevil, thus the presence of this small bird is a benefit to man.

The downy drums not only in search of food; during spring, drumming plays an important role in the courtship behavior of the birds. Singing, fluttering the wings, and raising and lowering the red patch are also part of the nuptial display. Once paired, downy woodpeckers proceed to drill a cavity in a branch or stub located approximately 10 to 50 feet above the ground.

Both male and female work on the nest site, first excavating a circular opening just large enough to fit the body, then widening and deepening the cavity inside. Four to five eggs are laid, and both birds share in incubating. The young are defenseless and naked when hatched and must be fed by the parents until they are ready to leave the nest.

Downy woodpeckers become more solitary as winter approaches. The same territory that supported one or more families during the summer months may support just one individual during winter when food is harder to come by. Nonetheless, it is during winter, when the leaves are off the trees, that we are most apt to notice these agile little tree climbers.

Closely related to the downy woodpecker and, indeed, almost a replica, albeit larger, is the hairy woodpecker (Picoides villosus). Both downy and hairy woodpeckers are black and white, and they are the only members of the family to have all white backs. The downy has dark spots on its white outer tail feathers which the hairy lacks. The hairy can also be distinguished from its smaller counterpart by its larger bill.

The hairy woodpecker is a shyer, more retiring bird than the downy and prefers forests over more open areas. Seldom seen in the summertime, the hairy woodpecker is more apt to be noticed in winter and will visit feeders, particularly where there is suet.

The feeding habits of the hairy woodpecker are similar to those of the downy. However, the hairy is even more a friend to man as studies have shown that more than 75 pecent of its diet consists of harmful insects. These birds should be valued as protectors of our forests.

Hairy woodpeckers are cavity nesters and usually select a site in deciduous woods, showing little preference for any particular tree species. Both male and female work to create the nest cavity which has an elliptical opening. They customarily leave a layer of fresh wood chips on which to lay their eggs and do not use any nesting material. Usually four eggs are laid; incubation duties and feeding of the young are shared by both parents. Young hairy woodpeckers are totally helpless at first, but soon learn to climb. After about three weeks, they leave the shelter of the nest, but they are still fed by the parents for several weeks before becoming wholly independent.

A hairy woodpecker seen in winter may not be the same individual that dwelt in adjacent woods the previous summer. It is believed that the population drifts and that there may be a general southward movement in the fall. Both hairy and downy woodpeckers excavate winter roosting cavities. These sheltered spots are used by woodpeckers (and occassionally by other permanent residents) as sleeping sites or retreats from icy blasts.

Another woodpecker that should be looked for in winter is the red-bellied woodpecker (Centurus carolinus). Common in the South, this species has been extending its range northward and is known to breed in southern New England. The field marks for the red-bellied woodpecker are its zebra-striped back, buffy underparts, and red nape which extends to the crown in male birds. The reddish tinge on the belly is scarcely distinguishable in the field.

Sightings of this bird in Connecticut are on the increase, and red-bellied woodpeckers will come to feeders. Their diet consists of both plant and animal material, including acorns and beechnuts which they store. In Florida, they have developed a liking for oranges.

A noisy bird, this woodpecker is more apt to be noticed when present than the two previously described, particularly during courtship when it utters quite a variety of peculiar sounds and coos. The red-bellied woodpecker's nesting behavior is similar to that of other woodpeckers. It, too, excavates a nest cavity, approximately a foot deep. Red-bellieds seem to prefer deciduous trees, such as elm, sycamore, or poplar, which are relatively soft-wooded; they sometimes use the same site for successive nesting seasons. Both adults share in the incubation and feeding of the helpless young birds.

The most spectacular of our woodpeckers, and perhaps of all our forest dwellers, is the pileated woodpecker (Dryocopus pileatus). (The term "pileated" derives from the Latin "pileatus," meaning crested.) A striking, crow-sized bird, the

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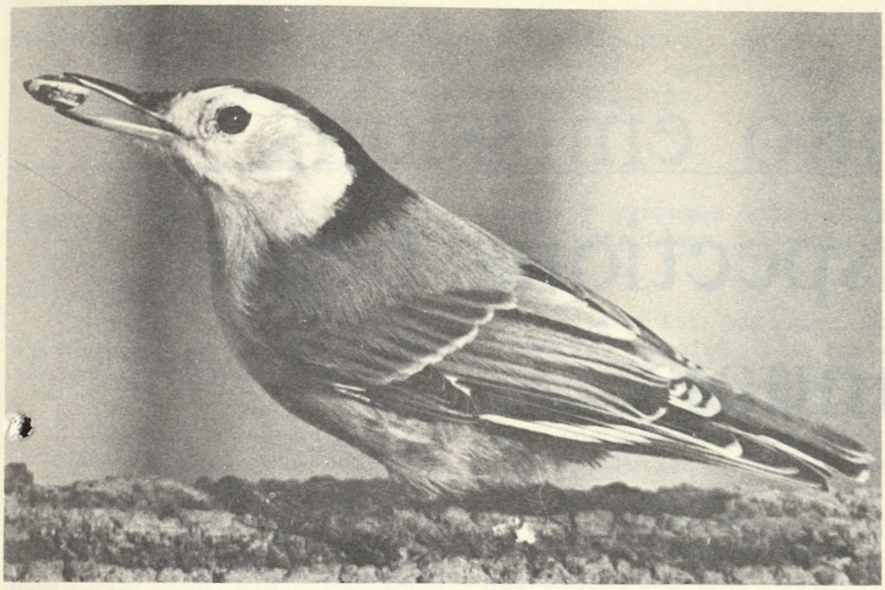
Beginning birdwatching

By Leslie Bieber, Citizen Participation Coordinator

Leonard Lee Rue III: Black-capped chickadee



Irene Vandermolen: White-breasted nuthatch

It's that time of year again. The activity of the holidays has subsided, and we can all settle in for what the "Farmer's Almanac" has predicted will be a long, cold winter. Finding ways to fill those bleak hours can be difficult. After you've taken an inventory of your cordwood, played your hundredth hand of solitaire, and realized that the only thing on TV on Sunday afternoon is celebrity pinball, what can you do to relieve the boredom? Bird watching! "Bird watching!" you say, "that's just for little old ladies in tennis shoes."

Actually, watching birds can be a facinating pastime. It's as easy as putting up a feeder in your yard or at your window. Once news has passed through the avian grapevine that food is available, you'll be playing host to many of the birds that overwinter in Connecticut.

If you are new to bird feeding, there are a few hints to follow. Feeders should be placed in a sunny area out of the wind. Where possible, put them near shrubs or evergreens where birds can find shelter from predators or inclement weather. Drainage holes should be placed in the bottom of the feeder to prevent rain or snow from accumulating.

Let's say you've decided to go ahead and put up a feeder. What kind of birds can you expect to see over the next few months? The first to arrive will probably be the black-capped chickadees. These are small, relatively tame little creatures with grayish plumage and distinctive black "cap" and "bib" markings. Shortly after the chickadees arrive you may see tufted titmice, mouse-colored relatives of the chickadees who sport pointed crests on their heads. Other birds commonly appearing at feeders are cardinals, blue jays, house finches, purple finches, gold finches, and a variety of sparrows including the song, white throated, white-crowned, chipping, tree, and field species. A suet feeder will attract woodpeckers to your yard as well.

Like any other animals, different birds have different food preferences. Wild bird seed is a popular and inexpensive mixture containing a variety of seeds such as cracked corn, sunflower, red and white millet, milo, oat groats, wheat, and buckwheat. Sunflower seed is excellent for attracting cardinals, chickadees, titmice, nuthatches, and finches. Goldfinches, purple finches, pine siskins, and redpolls love niger or thistle seed, a food that looks a little like caraway. Thistle does tend to be a more expensive food, however. Insect eaters like downy woodpeckers and flickers, as well as chickadees and nuthatches, love suet cake, which is a beef or bacon fat and seed mixture.

Bird food and feeders are available from a number of sources ranging from your supermarket to pet shops to mail-order catalogs. If you want good information dispensed along with birdseed, try your nearest nature center or Audubon center. In a pinch you can throw out well broken bread crumbs or stale donuts, but these don't provide the nutritional value of seed or suet.

Watching the action at your feeder can provide you with hours of entertainment. Birds can be fussy eaters; sometimes one will toss half of the seeds out of the feeder to reach the exact one he wants. (Don't worry about what falls to the ground. It will be cleaned up in no time.) Some of our feathered friends are remarkably acrobatic. Nuthatches, for instance, like to eat upside down and descend tree trunks head first. You may also get squirrels who will do their darnedest to rob the feeders. Their antics, while amusing, can deter some birds from feeding. A number of "squirrel-proofing" devices can be bought or made for your feeders.

A brief period of watching birds in your yard during the winter may stimulate your interest in "birding" as a year-round hobby. Connecticut is blessed with both vegetation and geographical location that attract many species. The coastal areas offer particularly varied viewing, especially during the spring and fall migration periods. Not only can you expect to see common shore and wading birds, but you might catch a glimpse of the osprey, a large fish-eating bird of prey, or even a bald eagle in the winter months.

The beginning birder needs only a few pieces of equipment to enjoy his time in the field. The most costly will probably be binoculars. When purchasing these, consider weight, as you may spend many hours trudging

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Auto emissions inspections begin January 3

On January 3, the State of Connecticut begins checking the emissions of residents' motor vehicles in a statewide drive to improve air quality.

The inspection program, established by a 1980 State law, is aimed at reducing air pollution in the State by 25 percent over the next five years in compliance with federal standards set by the Clean Air Act. Connecticut is one of 29 states or metropolitan areas in the U.S. in violation of the federal standards. In 1981, for example, the State Department of Environmental Protection reported excessively high photochemical smog on 111 days--nearly one out of every three days.

The objective of the Connecticut Vehicle Inspection Program is to identify motor vehicles that pollute excessively and have their owners repair and maintain them in good working condition. The tests will measure the levels of carbon monoxide and smog-producing hydrocarbons coming out of a motor vehicle's tailpipe. Hydrocarbons are the biggest contributors to Connecticut's major air pollution problem: ozone or "smog." Carbon monoxide can present serious pollution problems in areas of heavy, slow-moving traffic such as intersections and traffic jams. Motor vehicles--actually their incomplete burning of gasoline--are the biggest source of these pollutants.

Connecticut's inspection program is being operated by CTVIP, Inc., a United Technologies subsidiary selected by the State Department of Motor Vehicles, the program's administrator. CTVIP is a unit of UTC's Hamilton Test Systems subsidiary, a leader in vehicle inspection. Hamilton is involved in similar programs in Arizona, Southern California, and metropolitan New York City.

Every registered, gasoline powered motor vehicle manufactured from 1968 to the present that weighs up to 10,000 pounds will be inspected for excessive carbon monoxide and hydrocarbons emissions. That's approximately 1.6 million cars and light trucks.

Vehicles will be tested on a staggered basis through the year. Inspection stickers, which were mailed by the State in November, have imprinted on them the 15-day period during which a motorist must have his or her vehicle checked. The notification includes a booklet describing how the inspection program works.

CTVIP inspectors will check motor vehicles at 18 inspection stations located strategically throughout the State (See box.) The emissions test itself, conducted by computer, takes less than six minutes. The inspection fee is $10.00 per vehicle.

The motorist drives through one of the station's inspection lanes. There are three stops. At the first, information about the vehicle's model, year, weight, and engine cylinders is entered into the station's computer. At the second stop, a probe placed in the tailpipe measures the levels of carbon monoxide and hydrocarbons in the vehicle's emissions, and the computer compares them to emissions standards set by the DEP and stored in the computer's memory.

Vehicles will initially be evaluated for emissions at idle speed. If this test results in a failure, the vehicle will be operated on a dynamometer at a speed of approximately 30 mph and checked again. If the vehicle fails a subsequent test at idle speed, the owner will be required to have necessary adjustments or repairs made.

The failure rate is expected to be about 20 percent--or, in Connecticut, some 320,000 vehicles. (Motorcycles, off-road vehicles, farm equipment, and diesel vehicles are exempt from the program.)

At the final stop, the motorist pays the $10 inspection fee and receives an inspection report--a computer printout giving results of the test. A "pass" sticker is put on the windshield of vehicles that meet emissions standards. Owners of vehicles that fail have 30 days to repair them and have them retested. Reinspection is free.

Persons who want more information about the vehicle emissions inspection program may call CTVIP, based in Windsor Locks, toll free at 1-800-842-2000, or the Department of Motor Vehicles at 1-800-842-8222. ■

What happens when a vehicle fails inspection?

Vehicles that fail emissions inspection usually are improperly tuned. The computer printout which serves as the inspection report lists possible causes of excessive emissions, together with repairs the owner or mechanic can make to correct the problem.

In most cases, the vehicle which flunks needs a low-emissions tune-up requiring carburetor/ignition adjustments and replacement of some minor parts. The cost of such a tune-up averages between $15 and $35, experience in other states shows.

A motorist may have to pay more for repairs, but State law has set a cost ceiling of $70 per vehicle. However, this does not include work connected with any pollution control devices that are installed at the factory and these are not included in CTVIP's inspection.

When the vehicle is repaired, the motorist should get a copy of the repair bill, signed by the mechanic, and take it along with the inspection report to any inspection station for a free retest. A motorist making his own repairs should bring with him a copy of the invoice for the parts purchased for the repair work. ■

CTVIP

At the first stop in an emissions inspection information about the vehicle's model year, weight and engine cylinders is entered into the station's computer system. At the second stop, shown here, a probe placed in the tailpipe measures the levels of carbon monoxide and hydrocarbons in the vehicle's exhaust. The computer then automatically matches those levels to acceptable state emissions standards stored in the computer's memory.

Does emissions inspection work?

Experience has shown that emissions inspection works. Cars tested and repaired run more efficiently. They give off less carbon monoxide and smog-forming hydrocarbons into the air, and they run on less gas—saving motorists money.

In New Jersey, where the state has operated an inspection program for 10 years, the levels of carbon monoxide measured have dropped by 40 percent. Oregon's biannual inspection program has cut hydrocarbons and carbon monoxide measured in Portland's air by 15 percent and 20 percent, respectively.

Officials in Arizona, which has had an emissions inspection system since 1976, report impressive results. They've found that vehicles which failed inspection, and were then repaired, emitted 50 percent less carbon monoxide and hydrocarbons when they were retested. Arizona officials also estimate state motorists collectively are saving more than 30 million gallons of gasoline yearly as a result of their driving properly tuned and maintained vehicles. ■

Inspection stations

Plans call for inspection stations to be located in:

** BROOKFIELD*
** NORWALK*
** STAMFORD*
** STRATFORD*
** WINCHESTER*
** WATERBURY*
** NORTH HAVEN*
** FARMINGTON*
** BLOOMFIELD*
** NEWINGTON*
** MIDDLETOWN*
** MANCHESTER*
** EAST WINDSOR*
** OLD SAYBROOK*
** MANSFIELD*
** NORWICH*
** GROTON*
** BROOKLYN*

FYI:

Hazardous waste generation in Connecticut

By Leslie Bieber, Citizens' Participation Coordinator

In the June issue of the "Citizens' Bulletin," we discussed some ideas which Connecticut citizens have about the generation and disposal of hazardous wastes. While these wastes do constitute a real threat to the health, safety, and welfare of the public if improperly handled, they remain an undeniable by-product of our technological society.

The survey we cited (by the Natural Resources Council of Connecticut and the Institute for Social Inquiry) revealed some definite misconceptions about who generates hazardous wastes. For instance, sewage treatment plants and electrical generating stations were thought to be major contributors to the hazardous waste stream.

In reality these two industries account for only a small percentage of waste (if any), and most of it is easily treated. Ironically, distilling, farming, lumber mills, and photographic studios, which were thought to be minor sources of hazardous substances, produce some of the most toxic and persistent wastes, such as pesticides, solvents, mercury, etc.

There is no doubt that waste-generating industries play a vital role in Connecticut's economy. According to a report to the New England Council by the Arthur D. Little Company, those industries employ 27.9

Table I

CONNECTICUT HAZARDOUS/INDUSTRIAL WASTE GENERATION - 1979
PROJECTED TO TOTAL PRODUCTION EMPLOYMENT

	Oil (gallons)	Solvents (gallons)	Sludge (gallons)	Chemicals (gallons)	Other Mat. (pounds)
Ordnance	278,000	29,000	50,000	1,710,000	1,500
Textiles	8,000	859,000	126,000	-	-
Chemicals	101,000	2,776,000	381,000	5,500,000	304,630,000
Petroleum & Coal	170,000	-	-	-	1,754,000
Rubber & Plastic	851,000	425,000	2,286,000	-	3,426,000
Primary Metals	1,437,000	38,000	6,389,000	185,000	150
Fabricated Metals	711,000	222,000	43,636,000	161,000	10,000
Machinery	2,866,000	370,000	10,318,000	-	101,000
Electrical Equip.	196,000	96,000	2,006,000	-	1,002,000
Transportation	4,118,000	337,000	3,766,000	244,000	7,000
Instrumentation	72,000	81,000	140,000	183,000	40,000
Miscellaneous	39,000	55,000	1,011,000	7,000	-
TOTAL KEY INDUSTRIES	10,847,000	5,288,000	70,109,000	7,990,000	310,972,000

Source: Hazardous Waste Management: A Connecticut Perspective, October, 1979 percent of the State's work force and account for more than 33 percent of the total payroll. A considerable portion of their waste is in the form of sludges, the residue of Connecticut's large metal fabricating industry. Figures for waste generation by industry type are shown in Table I. Table II shows some current hazardous waste management practices.

Table II.

SOME CURRENT HAZARDOUS WASTE MANAGEMENT PRACTICES IN CONNECTICUT

Waste oil:	99%	reclaimed or burned in-house
Solvents:	58%	reclaimed or transported to private treatment and disposal facilities
	42%	incinerated
Sludge:	78%	disposed of on site of generating company
	19%	disposed of at municipal landfills
Chemicals:	84%	transported to private treatment facilities

*As reported by respondents to a recent survey of Connecticut industry. The responses represented about 32 percent of the total statewide manufacturing production employees.

Source: Hazardous Waste Management: A Connecticut Perspective, October, 1979

Technologies do exist for managing hazardous wastes in acceptable ways. According to the Arthur D. Little study, several management options are available. (It must be remembered that these options are far more costly than dumping wastes into an unsecured landfill.) The types of waste and how they might be handled are listed in Table III in order of amount generated in the region (greatest to least).

The hazardous waste problem is one that won't go away. The "not in my backyard" syndrome of public resistance to waste management facilities could not only have severe economic impacts on our region, it could actually cause more illegal dumping to occur.

People interested in the Arthur D. Little study, "Hazardous Waste Generation in New England," can obtain a copy for $9.50 from the New England Council, Statler Office Building, Boston, MA 02116; (617) 347-1012. General information on the subject can be found in "Hazardous Waste Management: A Connecticut Perspective," which is available from the League of Women Voters of Connecticut Education Fund, 60 Connolly Parkway, Hamden, CT 06514. ■

Table III.

WASTES GENERATED AND MANAGEMENT OPTIONS

Waste Type	Waste Examples	Business Examples	Management Options
INORGANIC SLUDGES & SOLIDS	WASTEWATER TREATMENT SLUDGES, PRE-TREATMENT SLUDGES, METAL PROCESSING RESIDUES	Fabricated Metals Industry, Jewelry Industry, Primary Metals Industry	TREATMENT FOR DETOXIFICATION or VOLUME REDUCTION prior to secure landfill
ORGANIC SLUDGES & SOLIDS	RESINS, STILL BOTTOMS, ORGANIC CHEMICALS	Plastics & Synthetics Mfr., Organic Chemicals Industry, Adhesives Mfr.	ROTARY KILN INCINERATION or SECURE LANDFILL
AQUEOUS SOLUTIONS	ACIDS, CAUSTIC SOLUTIONS containing caustic metal cyanides	Plating & Metal Finishing Electroplating Industry	TREATMENT FOR VOLUME REDUCTION or DETOXIFICATION prior to secure landfill
ORGANIC LIQUIDS	SOLVENTS, LUBRICATING OILS, TRANSFORMER FLUIDS	Aircraft & Parts, Auto Service Industries, Electronic Components	RECOVERY/ INCINERATION with heat value

Source: Arthur D. Little, Inc., 1982

By David Taylor

FY1982 in review

Highlights from DEP's annual report

In its 38-page fiscal 1982 Report to the Governor, the Department of Environmental Protection included the following activities and achievements for the last fiscal year:

* Coordination and administration of approximately 63 different federal programs providing an estimated $9,527,235 in federal funds.

* Acquisition of 2,270.99 acres of land for game management, parks, flood control structures, and other flood control related uses.

* Responses by the Park and Recreation Advisory Service to 109 requests from local parks and related organizations for technical assistance, a 55 per cent increase over the previous year.

* Management of inland and marine fisheries resources which provided nearly nine million days of recreation to over 400,000 freshwater and 300,000 marine anglers along with the harvest of over 14 million pounds of living marine resources taken by commercial fishermen.

* Stocking of streams with 805,385 catchable trout, 3,000 brown trout fingerlings, 243,000 kokanee salmon fry, and 267,700 Atlantic salmon fry and smolts as well as supplying 25,000 kokanee salmon fry to the State of Pennsylvania and 236,000 eyed brown and rainbow trout eggs to the states of Vermont and Massachusetts.

* Continued work on a five year study of the population dynamics of large mouth bass.

* Capture, tagging, and release of 283 legal-sized northern pike in the Connecticut River northern pike program.

* Collection of data by survey agents, angler diaries, and biological sampling on the Housatonic and Willimantic rivers as well as interviews of 1,000 anglers for the first segment of a four year project to evaluate "catch and release" trout management.

* Conversion of the Kensington Hatchery from trout to Atlantic salmon brought near to completion.

* Continued investigation of the population dynamics of scup, using the department's recently acquired 42-foot research vessel, the James P. Galligan, II.

* Assistance to local fire departments in controlling some of the last year's 1,558 reported forest fires, a number that was higher than normal for the second year in a row.

* Distribution of federal cost-sharing funding of nearly $60,000 to local fire departments to offset total fire costs of more than $200,000.

* Provision of technical assistance via over 900 visits to nearly 10,000 acres of privately owned woodland, plus advice leading to additional recreation, wildlife, and watershed benefits on another 17,887 acres.

* Sale of 2.2 million shrub and tree seedlings.

* Sale of wood products from state lands including 10,590 cords of fuelwood, more than three million board feet of saw timber, and 1,434 Christmas trees. Total forest products revenue value, at $432,000, was up 22 per cent from FY1981.

* Experimental spray projects for controlling gypsy moth infestations carried out on Cockaponset and Nehantic State Forests.

* Holding of a boating enforcement seminar for town marine police, harbor masters, and State Police who enforce boating laws.

* Developing a training course for seasonal employees hired as patrolmen in State recreational areas.

* A total of 3,940 arrests and 1,617 warnings for violations of laws concerning game and non-game animals and birds, sport fishing, use of State parks, forests, campgrounds, and boat launches, and regulations governing boating and commercial fishing.

* Total annual attendance at State Parks and State Forest recreation areas estimated at well over 12,000,000

* New boat camping program at Hurd, Gilette Castle, and Selden Neck State Parks begun with great success.

* "Campground Host Program" initiated, using volunteers to watch campgrounds and provide information to campground users in exchange for campsites.

* State park fees increased but higher rates for out-of-state campers removed.

* Methods sought to improve water quality in existing State park swimming areas and to develop new State swimming areas. Swimming ponds at Day Pond and Wadsworth Falls demucked and new beach sand put in place.

* Park improvement projects including: development of a new internal road system and a new underground electrical distribution system at Hammonasset Beach; the Bride Brook channelization project at Rocky Neck to stabilize the beach front; a lifeguard building at Rocky Neck; and toilet buildings at Black Rock, Wadsworth Falls, and Wharton Brook.

* Considerable progress made in efforts to restore the wild turkey population, now estimated at between 2,300 and 2,500 birds.

* Issuance of 31,530 firearms and archery permits for the State's seventh regulated deer hunting season.

* Controlled hunting of deer successfully used to reduce overcrowding and related problems.

* Expansion of the furbearer management program's pelt tagging system resulting in a more accurate assessment of the furbearer resource.

* Participation in design of a five-year Connecticut Breeding Bird Atlas program.

* Erection of 10 new osprey nesting platforms.

* Population inventories which revealed encouraging growth in population for osprey and wintering bald eagles and showed an increase in ducks, geese, and swans.

* Distribution of enough lumber to interested groups to construct 1,200 bluebird nesting boxes.

* Release of 32,237 pheasants and 600 chukar partridge on open areas available for public hunting as part of the gamebird stocking program.

* Expansion of the nuisance wildlife control program to include response capability for 15 species of wildlife.

* Production and distribution of 6,000 copies of the 1981 spring wild turkey season report; 65,000 Deer and Turkey Hunting Field Guides; and 40,000 deer season summaries.

* Introduction of new courses in firearms, trapper education, and bowhunter education, replacing the former hunter safety program.

* Preparation of State Implementation Plan outlining the strategies to be used by all concerned State agencies to improve and maintain Connecticut air quality standards.

* Operation of approximately 439 air monitoring, meteorological, and telemetry instruments at approximately 143 field locations.

* Performance of approximately 1,200 air emission source inspections and 1,500 field investigations for compliance with air pollution regulations.

* Received Phase I Interim Authorization to manage the federal hazardous waste program in Connecticut under the Resource Conservation and Recovery Act and began the application process for Phase II.

* Continued inventory of hazardous waste disposal sites mandated by the State Legislature.

* Compilation of systematic inventories of basic natural data -- surficial and bedrock geology, mineral resources, earth quake monitoring, systematic inventories of the biota of the state, rare and endangered species, and natural area identification.

* Evaluation of abandoned hazardous waste sites for application to EPA for federal "Superfund" assistance monies to supplement cleanup costs.

* Technical advice on the handling of hazardous wastes given to hundreds of industries and individuals.

* Cooperative work with the office of the Chief State's Attorney and the State Organized Crime Task Force on criminal violations of hazardous waste regulations.

* Administration of the State's noise control program and enforcement of the State's stationary noise regulations as well as active encouragement of development of local noise control ordinances.

* Responses by the Oil and Chemical Spills Section to over 1,100 spills of petroleum products and hazardous materials.

* Spill response equipment and personnel upgraded and computerized incident reporting procedures introduced.

* Establishment of three additional coastal oil spill cooperatives under federal funding.

* Recertification of commercial pesticide users, registration of pesticides, and investigation of accidents and misuses of pesticides.

* Nearly 75 PCB inspections for industry compliance with the federal Toxic Substances Control Act.

* Maintenance of an emergency response plan to handle accidents involving radioactive materials, in cooperation with the State Police and the Office of Civil Preparedness.

* Statewide survey of radioactivity present in the environment.

* Periodic inspections of the approximately 3,000 registered installations using diagnostic and therapeutic x-ray equipment.

* Registration and periodic inspection of all other sources of ionizing radiation (approximately 340 installations), and inspection of vehicles transporting radioactive materials.

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Woodpeckers

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pileated woodpecker is black with white underwings and white stipes on the neck. Both male and female have bright red crests, and the male has a red forehead and mustache. The pileated woodpecker, or log-cock as it is also known, is a bird of extensive deciduous forests. For all its conspicuous appearance, it is not often seen. However, once observed, this spectacular bird is never forgotten.

During the period following settlement, when most of Connecticut was cleared for agriculture, the pileated woodpecker all but disappeared. Happily, once the regrowth of our forest occurred, the pileated returned and has become well adapted to second growth woods. Its general adaptibility has enabled the species to stay in many suburban areas despite increasing development. As long as wooded tracts or corridors of relatively decent size remain, the pileated is likely to be among us.

This woodpecker's diet consists of insects that infest trees and is supplemented by acorns and berries. Ants are the primary food item, particularly carpenter ants. The pileated excavates huge holes in search of this favored food. If you come upon a pile of wood chips at the base of a tree and then notice an eight to 12 inch rectangular hole, you can be sure that a pileated woodpecker is at large.

As with other woodpeckers, pileateds are given to drumming during courtship. The loud reverberations can be heard over quite a distance. Some observers have noted that pileateds perform a kind of courtship dance, and there is some evidence to suggest that they mate for life.

Usually drilled in deciduous trees, their nesting sites are enormous cavities as much as two feet deep. The birds will return year after year to the same area and often to the same tree. Customarily, a new cavity is created for every clutch of eggs to be laid, but there have been instances in which nest holes were used more than once. No extraneous material is taken into the nest and eggs are laid directly on the floor of the cavity Both parents are diligent in caring for the young, which commonly number four.

Considering this large bird's size and appearance, it is surprising how seldom it is seen. Pileateds spend much of their time in the canopy layer of forests and are quite furtive and wary. Their presence is given away by large wood chips found beneath trees where they have been at work.

Woodpeckers are interesting birds to observe. If you wish to have a close look at woodpeckers, try placing a suet feeder in a nearby tree. Or take a hike in the winter woods. You are likely to encounter both downy and hairy woodpeckers and may be fortunate enough to see a pileated as well. ■

Bird watch

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with them around your neck. The tiny "opera glass" type, however, may cause eye strain if used all day. Your best bet is a pair with an adjustable right eyepiece and central focusing which allows you to zoom in on your subject. Also recommended is a good field guide to help identify what you see. The most popular is surely "A Field Guide to the Birds East of the Rockies" by Roger Tory Peterson. Full-color painted plates of every brid are included, as are maps of the various species' ranges. Another excellent reference is "The Audubon Society Field Guide to North American Birds: Eastern Region." This book uses color photographs as illustrations. The other item you may want to add to your field kit is a small notebook for jotting down descriptions, field markings, and other information.

There is a wealth of reading material available to anyone interested in birds. Besides the two field guides already mentioned, the following might be useful:

Books

"The Backyard Birdwatcher" by George H. Harrison (Simon & Schuster).

"Trees, Shrubs, and Vines for Attracting Birds," by Richard M. DeGraaf and Gretchen M. Whitman (University of Massachussetts Press).

"Songbirds in your Garden," by John K. Terres (Hawthorn).

"Guide to Bird Finding East of the Mississippi," by Dr. Olin S. Pettingill (Houghton Mifflin).

Magazines

"American Birds," edited by Robert Arbib, National Audubon Society, 950 Third Avenue, New York, NY 10022 (bi-monthly).

"Birding," edited by Jones A. Tucker, American Birding Association, Inc., P.O. Box 4335, Austin, TX 78765.

Pamphlets or Fact Sheets

"Invite Wildlife to Your Backyard," National Wildlife Federation, 1412 16th Street, NW, Washington, DC 20036. Free.

"Places to Look for Birds," Connecticut Department of Environmental Protection, Information and Education, State Office Building, Hartford, CT 06106. Free.

"Birdscaping Your Backyard" and "Feeding Winter Birds," Connecticut Audubon Society, 2325 Burr Street, Fairfield, CT 06430. Includes information on making your own feeders. Free.

Birdwatching is a clean, inexpensive pastime that can be enjoyed by the entire family year-round. It can also increase your awareness of all nature; birds are a significent barometer of environmental quality. So put up a feeder, sit back, and enjoy the view! ■

Annual report

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* Issuance of 14 permits for waste transfer stations and for the operation, expansion, or closure of existing landfills.

* Technical and financial assistance provided to a small scale regional resource recovery facility which, while handling more than 100 tons of solid waste from eight communities daily, supplied steam to a local industry, reducing consumption of fuel oil by 20,000 barrels per year.

* Over 300 ground water monitoring points sampled at or near landfills.

* Responsibility for ground water monitoring at 43 landfills turned over to the landfill owners.

* Some 1,100 inspections of solid waste disposal facilities resulting in the issuance of 16 Orders, 34 Notices of Violation, and 12 hearings and court actions.

* Revision of Connecticut's Water Quality Classifications, integrating ground water standards with the traditional surface water standards for the first time.

* Conducted 864 reconnaissance inspections of licensed sources of discharges to Connecticut waters to ensure that federal standards intended to reduce water pollution are not being exceeded.

* Conducted 485 reconnaissance inspections, 203 sampling inspections, and 65 interim construction inspections of State, municipal, and private waste water treatment facilities.

* Issuance of permits and enforcement of regulations governing activities in inland and tidal wetlands.

* Initiated planning, development, and engineering on 19 flood control projects and seven beach and shore erosion projects.

* Responded to the flood of June 5, 1982, implementing Flood Emergency Operations Plan and setting up DEP's Flood Emergency Operations Center to provide the Office of Civil Preparedness with engineering data and guidance regarding flood control structures, flood hazard areas, and dams on a 24 hour basis for the duration of the acute emergency.

* Utilized two- and three-man field teams to inspect potential emergency situations at dams and flood control structures during the flooding.

* Worked with federal Emergency Management Agency field personnel to estimate the extent of damage state-wide in preparation for a Presidential disaster declaration.

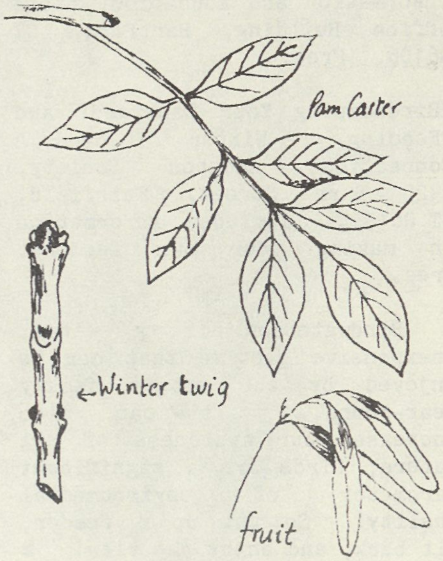
* Cooperated with federal staff in preparation of Damage Survey Reports on publicly owned property in four counties and participated in the preparation of the Interagency Flood Hazard Mitigation Team Report.

* All state operated flood control systems functioned effectively. ■

Trailside Botanizing

by G. Winston Carter

White ash
(Fraxinus americana)



The white ash is our most common ash. It grows best in moist lowlands where there is adequate sunlight, but because it can grow in a variety of habitats it is often found growing on drier sites in second growth woodlands as well as being a pioneer in old fields.

The white in the name of this species comes from the whitish underlining of its compound leaves. This rather tall, handsome, and stately tree has the typical ash-like characteristics. These include compound leaves arranged opposite one another, winged seeds which resemble tiny canoe paddles, and a gray bark that develops ridges which form diamond-shaped patterns as the tree grows outward and matures. Its winter buds are also a noticeable feature, the twigs being rather solid and blunt with the terminal bud larger than the two opposing lateral buds.

Although this tree is a common one, it doesn't grow in pure stands but tends to be scattered throughout the mixed hardwood forest. It is commonly found associated with maples, oaks, and birches.

White ash has many desirable features as a wood, which makes it a favorite for use in making baseball bats, tennis racquets, long tool handles, furniture veneer, and paneling. It is light and tough but pliable. The grain is straight, and it has the capacity for wearing smooth. Ash makes a superior firewood because of its high heat value and its ability to burn well regardless of whether it is wet or dry. Even unseasoned ask will burn because the sap is flammable.

Its value to wildlife appears to be only moderate. The young leaves and branches are food for the white-tailed deer, and the seeds are eaten to a certain extent by a variety of birds. Ash is a city-tolerant tree, and it is sometimes planted extensively for shade.

DEP Citizens' Bulletin
State of Connecticut
Department of Environmental Protection
State Office Building
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